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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,360	01/11/2002	Thomas S. Brima	DB000670-001	9221

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EXAMINER	
YOON, TAE H	

ART UNIT	PAPER NUMBER
1714	

DATE MAILED: 07/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/044,360	BRIMA ET AL.	
	Examiner	Art Unit	
	Tae H Yoon	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-70* is/are pending in the application.

4a) Of the above claim(s) *12-32 and 50-70* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,7-11,33-38 and 45-49* is/are rejected.

7)☒ Claim(s) *4-6 and 39-44* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-11 and 33-49, drawn to a synthetic hydrotalcite and a blend with a poly-addition polymer thereof, classified in class 524, subclass 437+.

II. Claims 12-32, drawn to a method of making a synthetic hydrotalcite, classified in class 556, subclass 1+.

III. Claims 50-64, drawn to a method of making a synthetic hydrotalcite- poly-addition polymer blend in an emulsion, classified in class 524, subclass 800+.

IV. Claims 65-70, drawn to a method of making a synthetic hydrotalcite- a maleated polyolefin polymer blend, classified in class 524, subclass 504+.

The inventions are distinct, each from the other because of the following reasons:

Inventions II (and III and IV) and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the blend can be made with a melt extrusion of polyolefin a synthetic hydrotalcite and said synthetic hydrotalcite can be made by first reacting a trivalent cation source and a divalent cation source, and then reacting with an organic anionic source.

Inventions III and IV are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed

does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the maleated polyolefin is not required. The subcombination has separate utility such as molded articles.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, and the search required for Group II-IV is not required for Group I, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. McWilliams on June 7, 2004 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-11 and 33-49. Affirmation of this election must be made by applicant in replying to this Office action. Claims 12-32 and 50-70 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation Al^{3+} as a trivalent cation and an optional trivalent cation (up to 50%) is confusing.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 7-11, 33-36 and 45-49 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Martin et al (US 5,728,366).

Martin et al teach the instant hydrotalcite at col. 3, line 64 to col. 4, line 15 and col. 6, line19 to col. 7, line 3. The use of said hydrotalcite in polyethylene, polypropylene and polyvinyl chloride is taught at col. 7, lines 55-60. Said hydrotalcite of Martin et al is capable of self exfoliation and of reversible exfoliation inherently. Thus, the instant invention lacks novelty.

Claims 1-3, 7-11, 33-36 and 45-49 are rejected under 35 U.S.C. 103(a) as obvious over Martin et al (US 5,728,366) in view of Bonora (US 5,977,218) or Nosu et al (US 6,313,208).

The instant invention further recites polystyrene and other polyolefins over Martin et al. However, the use of hydrotalcites in such polymers is well known as taught by Bonora (cols. 2-3) and Nosu et al (abstract and col. 6, lines 56-67).

It would have been obvious to one skilled in the art at the time of invention to utilize polystyrene or other polyolefins taught by Bonoro or Nosu et al in Martin et al, or to utilize a hydrotalcite of Martin et al in Bonora or Nosu et al since the use of hydrotalcites in various polymeric compositions is well known as taught by Bonora and Nosu et al absent showing otherwise.

Claims 1-3, 7-11, 33-38 and 45-49 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Martin et al (US 5,728,366) and Bortolon et al (US 6,437,049).

The instant invention further recites a maleated polypropylene over Martin et al. However, the use of hydrotalcites in such polymers is well known as taught by Bortolon et al (abstract and table 3).

It would have been obvious to one skilled in the art at the time of invention to utilize a maleated polypropylene taught by Bortolon et al in Martin et al, or to utilize a hydrotalcite of Martin et al in Bortolon et al since the use of hydrotalcites in various polymeric compositions is well known as taught by Martin et al and Bortolon et al absent showing otherwise.

Claims 4-6 and 39-44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H Yoon whose telephone number is (571) 272-1128. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tae H Yoon
Primary Examiner
Art Unit 1714

THY/June 24, 2004